

Pediatric Inpatient Readmissions in an Accountable Care Organization

Eric W. Christensen, PhD¹, and Nathaniel R. Payne, MD^{1,2}

Objective To assess the association between the length of consistent primary care as part of an accountable care organization (attribution length) and population-level and same-hospital readmissions. Readmission studies are generally focused on same-hospital readmissions rather than readmissions to any hospital (population-level readmissions).

Study design A retrospective study of Medicaid claims data for 28 794 unique pediatric patients attributed to a single children's hospital between September 2013 and May 2015. Study used logistic regression to estimate the impact of attribution length on readmissions and a zero-inflated Poisson model to assess the impact of attribution length on readmission cost and readmission days.

Results The study showed attribution length was associated with a significant reduction in the population-level 30-day readmission rate from 8.9%-6.2% (P = .010) primarily by reducing readmissions that occurred at hospitals other than the discharging hospital. There was no significant reduction in the same-hospital readmission rate. Readmissions to a different hospital occurred in 37% of readmissions. Although not significant at the P = .05 level, attribution length was associated with a 44% reduction (P = .100) in 30-day readmission costs or a 5.0% reduction in the cost of an inpatient episode of care and a 53% reduction (P = .019) in readmission days.

Conclusions Consistent primary care (attribution length) may be able to reduce 30-day, pediatric Medicaid patients' readmissions at the population level. The decrease occurred primarily in readmissions to hospitals other than the discharging hospital. There was no decrease in the rate of same-hospital readmissions. (*J Pediatr* 2016;170:113-9).

See editorial, p 14

dult hospital readmissions have received attention as a quality metric and potential source for cost savings. ^{1,2} The 30-day readmission rate for Medicare patients ranges from 18%-30% depending on the condition studied. ^{3,4} Pediatric readmissions have also been proposed as a quality metric, although they are less common and perhaps harder to reduce than adult readmissions. ⁵⁻⁷ The 30-day readmission rate for pediatric patients ranges from 3%-13% depending on the condition studied, ^{5,8-12} and the all-cause readmission rate ranges from 6%-13%. ^{11,13,14} Studies estimated that 21%-25% of pediatric readmissions were planned, ^{15,16} which is substantially higher than with adult readmissions (8%-10%). ^{3,17} Estimates of nonpreventable pediatric readmissions range from 57%-61% of all readmissions, ^{13,15} therefore, reducing readmissions may be more challenging with pediatric than with adult patients.

Studies show substantial variation in adult hospitals' readmission rates, which may signal quality issues.³ To address this, the Center for Medicare and Medicaid Services now levies financial penalties for "excessive" readmissions for Medicare patients for selected conditions.¹⁸ These penalties were common as 67% of hospitals received payment cuts in the first year.¹⁹ Estimates for 2014-2015 are that 80% of hospitals will be penalized, and hospitals treating a larger proportion of vulnerable patients are more likely to be penalized than other hospitals.²⁰ Similarly, Texas and Illinois measure and report pediatric readmission rates, and penalize hospitals with excessive readmission rates among Medicaid patients.⁴

There are few evidence-based interventions proven to reduce pediatric readmissions. However, improving the transition from hospital to home might be effective, as has been demonstrated in adults. Accountable care organizations (ACOs) take responsibility for both inpatient and outpatient care and have financial incentives for both quality and cost. Because of ACOs' financial incentives and scope of responsibility, they may have an opportunity to reduce readmissions by coordinating outpatient and inpatient care through consistent primary care.

Although there have been numerous studies of pediatric readmissions, there is little information about the impact of consistent primary care in an ACO (attribution length) on pediatric readmissions. Also, little is known about the population-level readmission rate as

ACO Accountable care organization

CHC Children's Hospitals and Clinics of Minnesota

DHS Minnesota Department of Human Services

ED Emergency department

FFS Fee-for-service

From the Departments of ¹Research and Sponsored Programs and ²Quality and Safety, Children's Hospitals and Clinics of Minnesota, Minneapolis, MN

Supported by the Children's Hospitals and Clinics of Minnesota. The authors declare no conflicts of interest.

0022-3476/\$ - see front matter. Copyright \circledcirc 2016 Elsevier Inc. All rights reserved.

http://dx.doi.org/10.1016/j.jpeds.2015.11.022

readmission studies generally represent same-hospital readmissions. ^{5,8,9,13-16} However, in practice, a sizable fraction of patients could be discharged from one hospital but readmitted to another. For an ACO, such "leakage" of readmissions could not only be costly but disrupt care management efforts. We hypothesized that attribution length in an ACO would reduce the 30-day readmission rate. To evaluate this, we estimated the relationship between attribution length in a pediatric Medicaid ACO and population-level readmissions, same-hospital readmissions, readmission cost, and readmission days.

Methods

Children's Hospitals and Clinics (CHC) of Minnesota is a nonprofit, independent entity that owns and operates 2 hospitals, an outpatient surgery center, and outpatient clinics throughout the Twin Cities metropolitan area. In 2014, CHC provided about 14 000 inpatient admissions, 95 000 emergency department (ED) visits, and 400 000 outpatient visits. In 2013, CHC entered into an ACO contract, called the Integrated Health Partnership, with the Minnesota Department of Human Services (DHS) to be accountable for about 15 000 pediatric Medicaid patients. This is the only Minnesota ACO serving an exclusively pediatric population. Under this ACO contract, DHS attributes Minnesota Medicaid patients to CHC retrospectively based on: (1) whether they are in a healthcare home; or (2) where they received the plurality of their primary care. Accordingly, the intervention in this study is being in a CHC healthcare home or receiving the plurality of their primary care at a CHC facility. We infer this represents consistent primary care as well as care management for medically complex patients. Attribution is a proxy for consistent primary care at a CHC clinic.

Note that patients were not aware that they were attributed to this ACO and could choose to receive any healthcare service from any provider. DHS reimbursed CHC for the care it provided to Medicaid patients on a fee-for-service (FFS) basis as it did for the other facilities at which these patients sought care. However, CHC was at risk for meeting quality and risk-adjusted cost targets for attributed patients, regardless of where patients' obtained healthcare services. If costs were below the target, CHC shared the savings evenly with DHS and if costs were above target, CHC was required to absorb 50% of the losses. Individual physicians or practices were not incentivized as part of this ACO.

We used a retrospective cohort design. Our primary outcome variables were the population-level and same-hospital 30-day readmissions. We also examined the impact of attribution length (consistent primary care) on readmission cost and readmission days. Our sample consisted of 28 794 patients (age ≤20 years) attributed to the CHC ACO at some point between September 2013 and May 2015.

Each month DHS provided a year of claims data, which included a 3-month run-out period during which a late claim could be included for the reporting period to capture complete costs. For attributed patients in September 2013, for example, these data covered all claims from June 2012-May 2013. Hence, at attribution patients would have been in a CHC medical home or receiving the plurality of their primary care at a CHC clinic during the year represented in the claims data. The intervention period included admissions occurring 16 or more months after receiving primary care in a CHC clinic compared with admissions that occurred during months 1-9 of such care (reference period; Figure 1). In other words, attribution is a proxy for consistent primary care at a CHC clinic. As the ACO began in January 2013, the initial cohort was the largest but accounts for only 25% of all admissions.

DHS provided a summary file, which indicates patient age, sex, county of residence, patient resource utilization measure, whether the Medicaid patient was a FFS patient compared with a capitated patient, and if they had other health insurance at some point during the study period. Both FFS and capitated patients were included. Capitated patients maintained their relationship with a managed care company while they were attributed. FFS patients

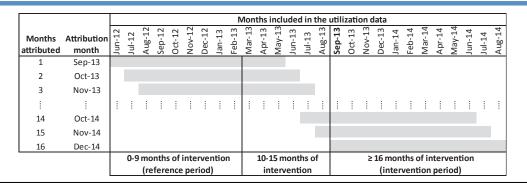


Figure 1. Admissions data and attribution (illustrated, as an example, using a patient attributed in Sept. 2013). At attribution, patients would have been receiving CHC-based healthcare home care or the plurality of their primary care at a CHC clinic (intervention) during the year represented in the claims data.

114 Christensen and Payne

Download English Version:

https://daneshyari.com/en/article/6219085

Download Persian Version:

https://daneshyari.com/article/6219085

<u>Daneshyari.com</u>